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Palese et al.

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(54) **GENETICALLY ENGINEERED SWINE
INFLUENZA VIRUS AND USES THEREOF**

(71) Applicants: **Icahn School of Medicine at Mount
Sinai, New York, NY (US); St. Jude
Children's Research Hospital,
Memphis, TN (US); The United States
of America, As Represented by the
Secretary of Agriculture, Washington,
DC (US)**

(72) Inventors: **Peter Palese, New York, NY (US);
Adolfo Garcia-Sastre, New York, NY
(US); Richard J. Webby, Memphis,
TN (US); Juergen A. Richt, Ames, IA
(US); Robert G. Webster, Memphis,
TN (US); Kelly M. Lager, Colo, IA
(US)**

(73) Assignees: **Icahn School of Medicine at Mount
Sinai, New York, NY (US); St. Jude
Children's Research Hospital,
Memphis, TN (US); The United States
of America, as Represented by the
Secretary of Agriculture, Washington,
DC (US)**

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patent is extended or adjusted under 35
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(58) **Field of Classification Search**

None

See application file for complete search history.

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Primary Examiner — Benjamin P Blumel

(74) *Attorney, Agent, or Firm* — Jones Day

(57) **ABSTRACT**

The present invention relates, in general, to attenuated swine
influenza viruses having an impaired ability to antagonize
the cellular interferon (IFN) response, and the use of such
attenuated viruses in vaccine and pharmaceutical formula-
tions. In particular, the invention relates to attenuated swine
influenza viruses having modifications to a swine NS1 gene
that diminish or eliminate the ability of the NS1 gene
product to antagonize the cellular IFN response. These
viruses replicate in vivo, but demonstrate decreased repli-
cation, virulence and increased attenuation, and therefore are
well suited for use in live virus vaccines, and pharmaceutical
formulations.

28 Claims, 11 Drawing Sheets

Specification includes a Sequence Listing.